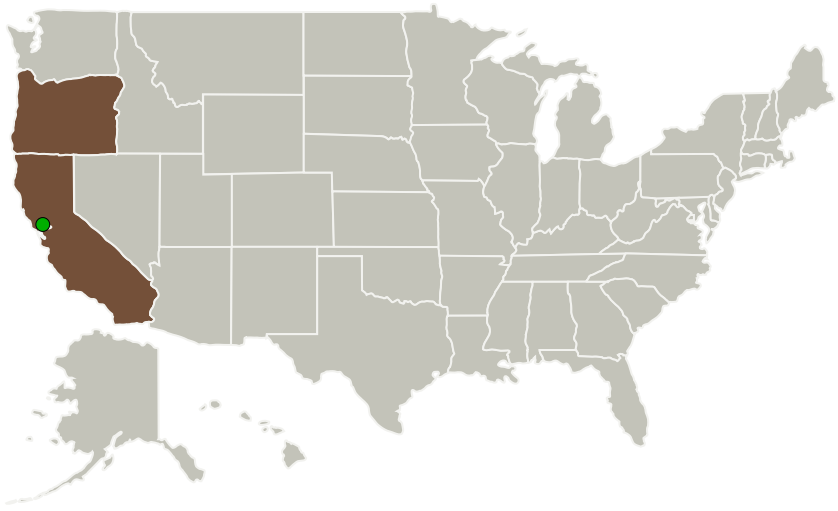
Airline Operational Control (AOC)/UAS Ground Control Station (GCS) Collaboration, Phase I

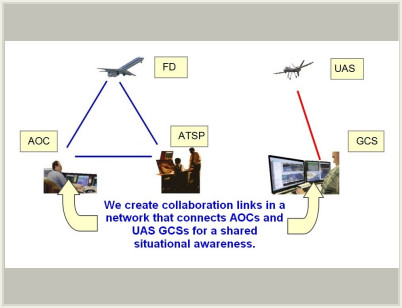
Completed Technology Project (2014 - 2014)

Project Introduction

We propose to form a network and a set of tools that will create a shared situation awareness with Unmanned Aircraft Systems (UAS) Ground Control Stations (GCSs) and airline dispatchers at Airline Operations Centers (AOCs). Our solution is motivated by the Collaborative Decision Making (CDM) community in commercial aviation, where the CDMnet was created back in 1997 to facilitate collaboration between airlines and the Federal Aviation Administration (FAA). The CDMnet continues to exist today to allow airlines to collaborate on Traffic Flow Management (TFM) decisions that are made by airlines and FAA Air Traffic Service Providers (ATSPs) every day. Today, with the introduction of Unmanned Aircraft Systems (UAS) flying in the National Airspace System (NAS), there is a need for collaboration between UAS, ATSP, and AOCs in UAS Traffic Management (UTM) in order to share airspace resources. Thus, the focus of this SBIR effort is to build a network that allows UAS GCSs to share information and collaborate with airline AOCs in order to create a shared situation awareness and to share and coordinate NAS airspace resources.

Primary U.S. Work Locations and Key Partners





Airline Operational Control (AOC)/UAS Ground Control Station (GCS) Collaboration Project Image

Table of Contents

Small Business Innovation Research/Small Business Tech Transfer

Airline Operational Control (AOC)/UAS Ground Control Station (GCS) Collaboration, Phase I

Completed Technology Project (2014 - 2014)

Organizations Performing Work	Role	Type	Location
The Innovation Laboratory, Inc.	Lead Organization	Industry Women-Owned Small Business (WOSB)	Portland, Oregon
Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Oregon

Project Transitions

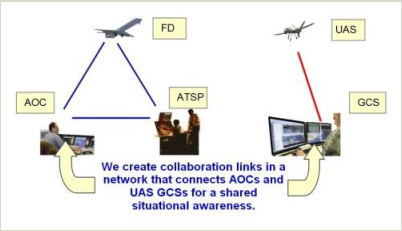
June 2014: Project Start

December 2014: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/137489)*

Images



Project Image
Airline Operational Control (AOC)/UAS Ground Control Station (GCS) Collaboration Project Image *(https://techport.nasa.gov/image/136778)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

The Innovation Laboratory, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

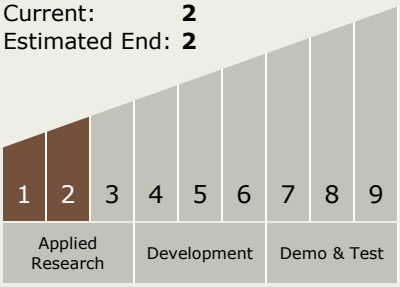
Carlos Torrez

Principal Investigator:

Jimmy Krozel

Technology Maturity (TRL)

Start: **1**
Current: **2**
Estimated End: **2**



Airline Operational Control (AOC)/UAS Ground Control Station (GCS) Collaboration, Phase I

Completed Technology Project (2014 - 2014)

Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.6 Ground Computing
    - TX11.6.6 Cognitive Computer

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System